

WHAT IS CLAIMED:

1. An encapsulated organic optoelectronic device, comprising:
 - a substrate;
 - an organic optoelectronic device on said substrate, said organic optoelectronic device includes a cathode;
 - a diffusion layer on said organic optoelectronic device, said diffusion layer covers exposed areas of said organic optoelectronic device;
 - an adhesive layer on said substrate and around a perimeter of said diffusion layer;
 - an encapsulation lid on said adhesive layer; and
 - a getter on said encapsulation lid, said getter overlies said organic optoelectronic device,wherein said diffusion layer slows a rate of absorption of reactive gasses by said cathode and increases a proportion of said reactive gasses absorbed by said getter relative to said cathode.
2. The encapsulated organic optoelectronic device of claim 1 wherein said diffusion layer is a solvent-free organic polymer layer.
3. The encapsulated organic optoelectronic device of claim 1 wherein said diffusion layer is a solvent-free UV-curable acrylate material.
4. The encapsulated organic optoelectronic device of claim 1 wherein said diffusion layer is a UV-curable or thermally-curable solvent-free epoxy.
5. The encapsulated organic optoelectronic device of claim 1 wherein said diffusion layer is a solvent-free photoresist.
6. The encapsulated organic optoelectronic device of claim 1 wherein said reactive gasses are oxygen and moisture.

7. The encapsulated organic optoelectronic device of claim 1 wherein said getter has a relatively slow rate of absorption compared to a rate of absorption of said cathode.
8. The encapsulated organic optoelectronic device of claim 1 wherein said organic optoelectronic device is any one of: an OLED display, an organic light sensor array, an organic solar cell array, or an organic laser.
9. A method to encapsulate an organic optoelectronic device, comprising:
fabricating said organic optoelectronic device on a substrate, said organic optoelectronic device includes a cathode;
depositing a diffusion layer on said organic optoelectronic device, said diffusion layer covers exposed areas of said organic optoelectronic device;
depositing an adhesive layer on an encapsulation lid or on said substrate around a perimeter of said diffusion layer such that when said adhesive layer, said encapsulation lid, and said substrate are brought together, said organic optoelectronic device is sealed; and
attaching a getter to said encapsulation lid such that when said adhesive layer, said encapsulation lid, and said substrate are brought together, said getter overlies said organic optoelectronic device.
10. The method of claim 9 further comprising
bringing together said encapsulation lid and said substrate such that said adhesive layer bonds with both said substrate and said encapsulation lid to seal said organic optoelectronic device.
11. The method of claim 9 wherein said diffusion layer slows a rate of absorption of reactive gasses by said cathode and increases a proportion of said reactive gasses absorbed by said getter in relation to said cathode.
12. The method of claim 9 wherein said diffusion layer is a solvent-free organic polymer layer.

13. The method of claim 9 wherein said diffusion layer is a solvent-free UV-curable acrylate material.
14. The method of claim 9 wherein said diffusion layer is a UV-curable or thermally-curable solvent-free epoxy.
15. The method of claim 9 wherein said diffusion layer is a solvent-free photoresist.
16. The method of claim 9 wherein said organic optoelectronic device is any one of: an OLED display, an organic light sensor array, an organic solar cell array, or an organic laser.
17. A method to encapsulate an organic optoelectronic device, comprising:
fabricating said organic optoelectronic device on a substrate, said organic optoelectronic device includes a cathode;
attaching a getter to an encapsulation lid; and
slowing a rate of absorption of reactive gasses by said cathode, and
increasing a proportion of said reactive gasses absorbed by said getter relative to said cathode by depositing a diffusion layer on said organic optoelectronic device, said diffusion layer covers exposed areas of said organic optoelectronic device.
18. The method of claim 17 further comprising
bonding together said encapsulation lid and said substrate to seal said organic optoelectronic device.
19. The method of claim 17 wherein said diffusion layer is a solvent-free organic polymer layer.
20. The method of claim 17 wherein said diffusion layer is a solvent-free UV-curable acrylate material.

21. The method of claim 17 wherein said diffusion layer is a UV-curable or thermally-curable solvent-free epoxy.
22. The method of claim 17 wherein said diffusion layer is a solvent-free photoresist.
23. The method of claim 17 wherein said organic optoelectronic device is any one of: an OLED display, an organic light sensor array, an organic solar cell array, or an organic laser.